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# REMARKS ON THE COLUBRID GENUS *CHILOMENISCUS* (SERPENTES: COLUBRIDAE)[1]

by

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In 1860, Cope established the genus *Chilomeniscus* to accommodate a single species, *C. stramineus*. Subsequently Cope described three more nominal species, and others have since brought the number to seven. Of these four are currently recognized: *C. cinctus, C. punctatissimus, C. savagei,* and *C. stramineus*. Recently the authors received on loan from the Chicago Natural History Museum one specimen belonging to this genus taken on Cedros Island, off the Pacific coast of central Baja California, Mexico. In attempting to place this specimen it was necessary to re-examine the status of other nominal species.

Acknowledgments

The authors are first of all indebted to Dr. Robert F. Inger, Chicago Natural History Museum (CNHM) for the loan of the Cedros Island specimen as well as for the loan of other materials of this genus. For the loan of additional specimens the authors wish to thank Mr. Charles M. Bogert and Dr. Richard G. Zweifel, American Museum of Natural History (AMNH); Dr. Doris M. Cochran, United States National Museum (USNM); Dr. Norman

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Hartweg, Museum of Zoology, University of Michigan (UMMZ); Dr. Laurence M. Klauber (LMK and SDNHM [San Diego Natural History Museum]); Dr. George S. Myers, Division of Systematic Biology, Stanford University (SU); Dr. Kenneth S. Norris, University of California at Los Angeles (UCLA); Mr. Neil Richmond, Carnegie Museum (CM); Dr. Jay M. Savage, University of Southern California (USC); Dr. Robert C. Stebbins, Museum of Vertebrate Zoology, University of California at Berkeley (MVZ); Dr. Ernest E. Williams, Museum of Comparative Zoology, Harvard University (MCZ); and Dr. Wilmer W. Tanner, Brigham Young University, Provo, Utah (BYU). The authors are indebted to Mr. Maurice Giles for the photographs for figures 1 through 9.

## Review of Characters

The nominal species of *Chilomeniscus* have been distinguished mainly by differences in color pattern, contact, or lack of it, between the rostral and prefrontals, and ventral and subcaudal counts. A review of these characters indicates that they are indeed useful in separating populations.

Of the above, the most prominent are differences in color pattern between *C. stramineus* (figure 1) and the other species. This species alone lacks alter-


Figure 1. *Chilomeniscus stramineus stramineus* Cope (AMNH 87586), from El Chorro, near Agua Caliente, Baja California Sur, Mexico.

nating light and dark cross bars or rings. The dorsum is uniformly light brown, each scale bearing a minute dark spot, either at its apical or basal end. The other nominal species have distinct dark cross bars (figure 2).

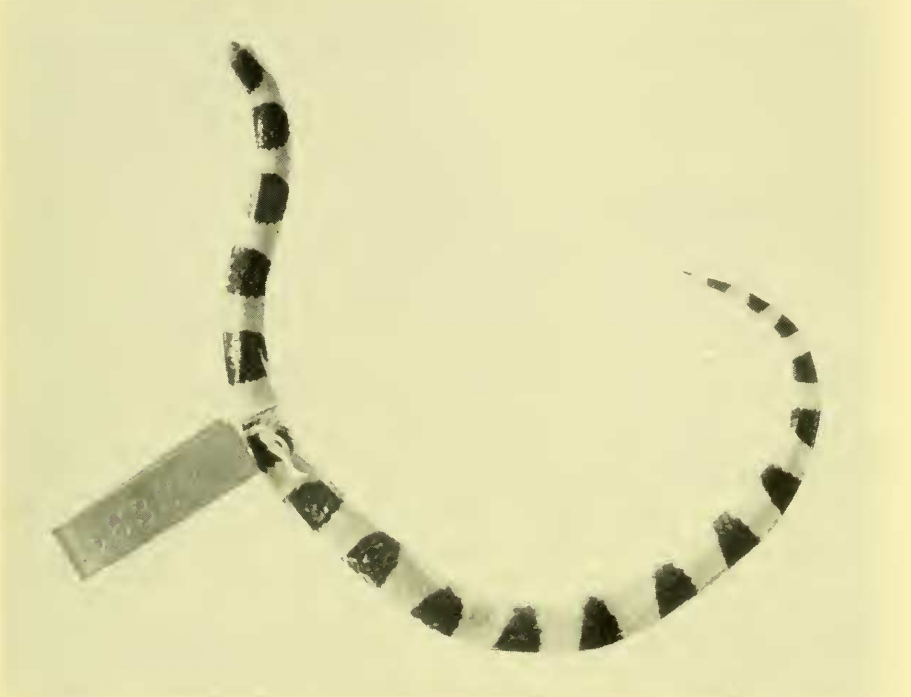


FIGURE 2. *Chilomeniscus cinctus* Cope (AMNH 66338), from Guaymas, Sonora, Mexico.

These bars may or may not encircle the body (table 1). There is no evidence from the material at hand that populations may be distinguished on the basis of whether or not the dorsal bars extend onto the venter. Specimens drawn from the same population, collected at the same locality and at the same time, differ.

In a like manner the relative widths of the dark and light bands seem to vary independently. In general the light bands are narrower than the dark bands on the anterior portion of the body, about equal at and near midbody, and somewhat broader posteriorly. There are exceptions, but they are not numerous (table 2).

There is considerable variation in the number of dark bands, too. The greatest variation was found among the specimens forming the "Cape Region" sample from southern Baja California, the least among the specimens from Arizona. Specimens from Sonora (figure 2) have fewer cross bars than any of the others studied (table 3).

Table 1. *Summary of variation in the encirclement of the body by dark cross bands in* Chilomeniscus cinctus.

| Locality | Number of individuals in which cross bands are confined to dorsum | Number of individuals in which cross bands encroach on or encircle venter | |
|---|---|---|---|
| | | Posteriorly only | Entire body |
| Sonora | 0 | 3 | 2 |
| Arizona | 13 | 14 | 8 |
| Baja California Norte | 1 | 5 | 8 |
| Baja California Sur | | | |
| San Ignacio | 2 | 2 | 3 |
| Commondu | 6 | 1 | 3 |
| Cape Region[2] | 8 | 0 | 0 |
| Isla San Jose | 1 | 0 | 0 |
| Isla Cedros | 0 | 0 | 1 |

2. Cape Region includes that part of the peninsula of Baja California south of La Paz.

Table 2. *Summary of variation in the width of dark cross bands at midbody in* Chilomeniscus cinctus.

| Locality | Light interspaces greater than, equal to, or less than dark bands at midbody | | |
|---|---|---|---|
| | Greater than | Equal to | Less than |
| Sonora | 0 | 1 | 6 |
| Arizona | 7 | 19 | 8 |
| Baja California Norte | 2 | 6 | 5 |
| Baja California Sur | | | |
| San Ignacio | 1 | 3 | 1 |
| Commondu | 3 | 3 | 4 |
| Cape Region | 3 | 3 | 2 |

Table 3. *Summary of variation in the number of dark cross bands on the body in* Chilomeniscus cinctus.

| Locality | Male | | | Female | | |
|---|---|---|---|---|---|---|
| | N | Mean | Range | N | Mean | Range |
| Sonora | 2 | 16.0 | 14–18 | 3 | 16.0 | 15–17 |
| Arizona | 21 | 20.0 | 18–23 | 15 | 19.8 | 17–21 |
| Baja California Norte | 2 | 22.0 | 22 | 12 | 21.1 | 17–24 |
| Baja California Sur | | | | | | |
| San Ignacio | 5 | 22.0 | 19–24 | 2 | 22.0 | 20–24 |
| Commondu | 5 | 26.0 | 21–39 | 5 | 28.2 | 22–34 |
| Cape Region | 2 | 26.6 | 20–33 | 5 | 24.0 | 20–28 |
| Isla Monserrate | | | | 1 | 22 | |
| Isla Magdalena | | | | 1 | 32 | |
| Isla San Jose | 1 | 25 | | | | |
| Isla San Marcos | | | | 1 | 24 | |
| Isla Cedros | 1 | 23 | | 1 | 19 | |

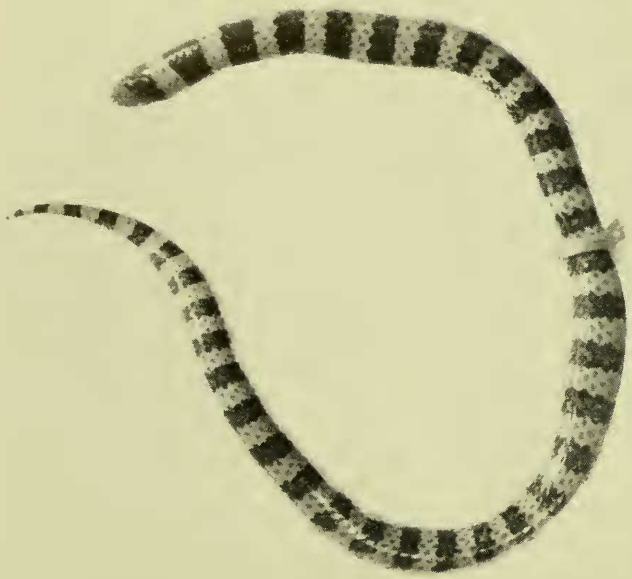
It is noteworthy that occasionally specimens turn up that are intermediate in pattern between *C. cinctus* and *C. stramineus,* both cross bands and punctations being present (figures 3 and 4). The significance of these intermediates is not known. We have no evidence to indicate that they are hybrids. One species, *Chilomeniscus punctatissimus* (figure 4) has been distinguished from *C. cinctus* by the presence of small dark spots in the light interspaces. However, Linsdale (1932, p. 382) pointed out that some Baja California specimens of *C. cinctus* are similarly ornamented, and in this we concur.

In regard to color pattern, one problem yet to be solved is whether the populations differ in the presence or absence of red in the light interspaces. Specimens from Sonora, observed alive, have red pigment in the light interspaces; specimens taken alive in the La Paz and Todos Santos areas of southern Baja California, lack red pigments. Perhaps the presence or absence of red pigments may be significant; we do not know.

The rostral may or may not contact the prefrontals. *Chilomeniscus punctatissimus* and *C. savagei* (figure 5) have the rostral separated from the prefrontals by the internasals; the prefrontals are reduced and do not meet at the midline. In *C. stramineus* the rostral is also separated from the prefrontals by the internasals, though rarely this is not true. In six specimens of more than 50 the rostral did contact the prefrontals. In *C. cinctus* the internasals are reduced, prefrontals meet at the midline, and the rostral contacts the prefrontals. This condition also obtains in Cope's nominal species *C. stramineus fasciatus* (figure 6), and *C. ephippicus* (figure 7).

Ventral counts are subject to sexual dimorphism and to some extent geographical variation. Linsdale (1936, pp. 232–234) summarized the counts of a large sample of *C. stramineus* from Baja California. Several of his specimens were incorrectly sexed (we have checked each one!); with minor adjustments for this the following ranges were obtained: ventrals [♂] 107–114, [♀] 111–122; subcaudals [♂] 24–32, [♀] 25–30. Sexual dimorphism in ventral counts is obvious; it is not so clearly defined in subcaudal counts. In a like manner in a sample of 36 specimens of *C. cinctus* from Arizona: ventrals [♂] 108–119, [♀] 114–122; subcaudals [♂] 26–31, [♀] 22–27. It is evident that geographical comparisons in ventral and subcaudal counts must be made within sexes (tables 4 and 5).

Specimens of *C. savagei* have the highest ventral count known for the genus (134–136, 2 females). All other species range between 105 and 129 with males between 105–120 and females 111–129. One exception exists, a single male taken on Cedros Island (figure 8). It has 126 shields. *Chilomeniscus punctatissimus,* known from two females from Isla Partida (Sur)-Espiritu Santo, is characterized by having 119–121 ventrals and 23–25 subcaudals; these ranges are similar to both *C. stramineus* and *C. cinctus.* In



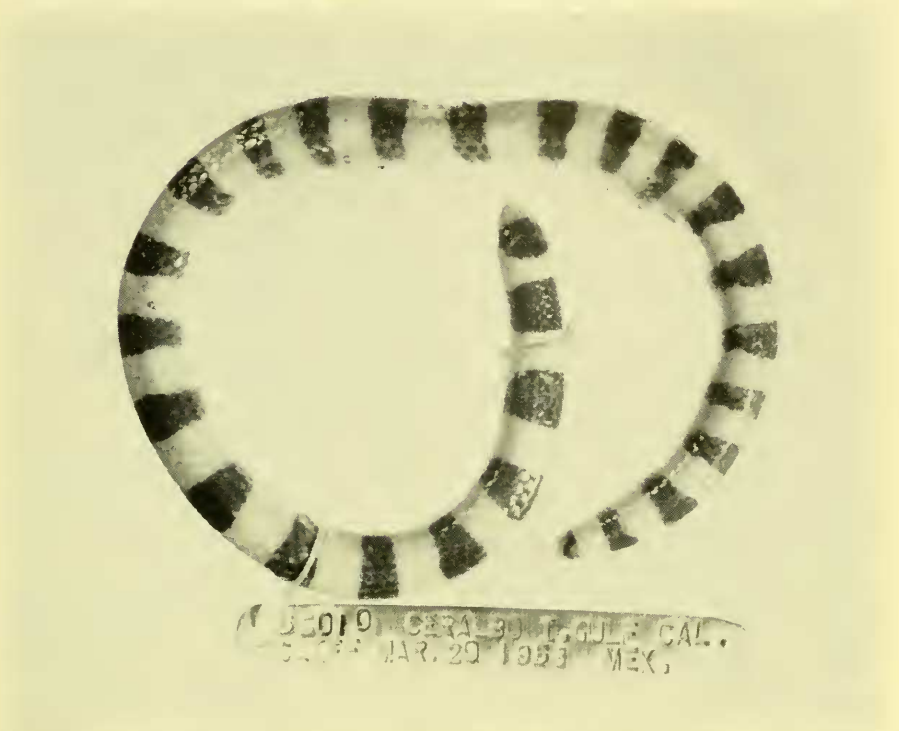


FIGURE 5. *Chilomeniscus savagei* Cliff (CAS 85010, Paratype), from Cerralvo Island, Gulf of California, Mexico.

1939, Hoard described *C. stramineus esterensis* (figure 9), distinguishing it from the nominal form by differences in ventral counts (♂ 114–123, ♀ 127–132). In this he seems entirely justified.

In summary, *Chilomeniscus stramineus* is easily distinguishable by color pattern; the Estero Salina population appears to be distinct on the basis of the higher ventral count, and Hoard's nominal subspecies is recognized. *Chilomeniscus punctatissimus* and *C. savagei* are both readily distinguishable from *C. stramineus* by color pattern, from *C. cinctus* by having reduced prefrontals not in contact at the midline and separated from the rostral by the internasals, and from each other by ventral counts.

*Chilomeniscus cinctus* is very variable. In color pattern the Sonora

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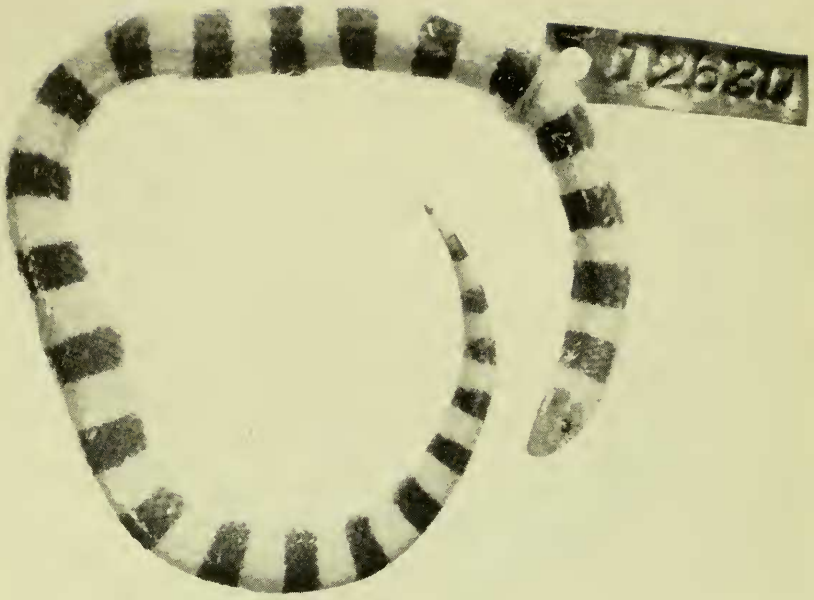
FIGURE 3. *Chilomeniscus stramineus esterensis* Hoard (LMK 30373), showing color pattern containing elements of both *C. stramineus* and *C. cinctus* patterns.

FIGURE 4. *Chilomeniscus punctatissimus* Van Denburgh & Slevin (CAS 49156, Holotype), from Isla Espiritu Santo, Gulf of California, Mexico.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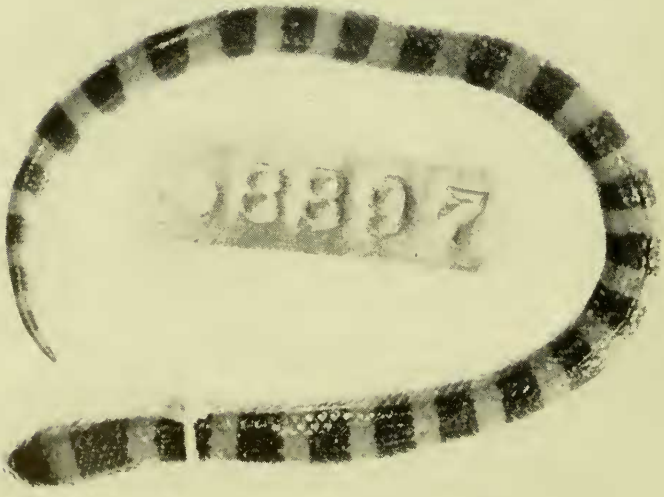
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sample seems quite distinct in its lower number of dark cross bands, while the Commondu-Cape Region samples are more variable than any of the others and average more dark bands. The Arizona and northern Baja California samples (including that from San Ignacio), both represented by 15 or more specimens, are the most homogenous and are similar to each other. Additional material is needed from Sonora and central Baja California before the taxonomic implications of these apparent differences and similarities can be evaluated. Little importance is attached, at this time and based on available samples, to differences in ventral and subcaudal counts, though one specimen, taken on Cedros Island, deserves special note. This is the single male whose ventral count exceeds that of any other *C. cinctus* male and most "*cinctus*" females. However, a single female, also from Cedros, has a ventral count that falls well within the range for females from the mainland of central Baja California. In view of the marked sexual dimorphism in *C. cinctus*, this suggests that the Cedros male is abnormal in this character. If not, which remains to be seen after more collections are made, then the Cedros population should probably be accorded taxonomic recognition.

At the present time we recognize the following species and subspecies of *Chilomeniscus:*

*Chilomeniscus cinctus* Cope

*Chilomeniscus punctatissimus* Van Denburgh & Slevin

*Chilomeniscus savagei* Cliff

*Chilomeniscus stramineus esterensis* Hoard

*Chilomeniscus stramineus stramineus* Cope

Key to the Species of Chilomeniscus

1a. Rostral in contact with prefrontals; prefrontals broadly in contact at midline; internasals separated at midline; color pattern consists of an alternating series of dark and light cross bands ..... *C. cinctus*

1b. Rostral usually not in contact with prefrontals; prefrontals not in contact at midline; internasals in contact at midline; color pattern variable.

2a. Alternating dark and light bands on body, occasionally with some minute punctations in light areas.

3a. Ventrals more than 130 ..... *C. savagei*

3b. Ventrals less than 125 ..... *C. punctatissimus*

2b. Uniform light brown on dorsum, without cross bands but with dark, longitudinally arranged, small spots, one to each scale.

4a. Ventrals: ♂ 103–114, ♀ 111–122 ..... *C. s. stramineus*

4b. Ventrals: ♂ 114–123, ♀ 127–132 ..... *C. s. esterensis*

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Figure 6. *Chilomeniscus stramineus fasciatus* Cope [= *C. cinctus*] (USNM 12630, Syntype), from La Paz, Baja California Sur, Mexico.

Figure 7. *Chilomeniscus ephippicus* Cope [= *C. cinctus*] (USNM 8897, Holotype), said to have come from the Owens Valley, California.


Figure 8. *Chilomeniscus cinctus* Cope (CNHM 130286), from Isla Cedros, Pacific Coast of Baja California, Mexico.

Table 4. *Summary of variation in ventral counts in* Chilomeniscus cinctus.

| Locality | Male N | Male Mean | Male Range | Female N | Female Mean | Female Range |
|---|---|---|---|---|---|---|
| Sonora | 2 | 114.0 | 113–115 | 3 | 112.3 | 111–115 |
| Arizona | 21 | 114.8 | 108–119 | 15 | 118.9 | 114–122 |
| Baja California Norte | 2 | 117.0 | 114–120 | 12 | 121.6 | 112–129 |
| Baja California Sur | | | | | | |
| San Ignacio | 5 | 113.8 | 109–117 | 2 | 121.0 | 120–122 |
| Commondu | 5 | 115.0 | 110–119 | 5 | 121.2 | 117–125 |
| Cape Region | 3 | 109.3 | 108–111 | 5 | 117.0 | 115–118 |
| Isla Monserrate | | | | 1 | 128 | |
| Isla San Jose | 1 | 105 | | | | |
| Isla San Marcos | | | | 1 | 116 | |
| Isla Cedros | 1 | 126 | | 1 | 125 | |

TABLE 5. *Summary of variation in subcaudal shields in* Chilomeniscus cinctus.

| Locality | Male N | Male Mean | Male Range | Female N | Female Mean | Female Range |
|---|---|---|---|---|---|---|
| Sonora | 2 | 27.5 | 26–29 | 3 | 25.7 | 24–28 |
| Arizona | 21 | 29.7 | 26–31 | 15 | 25.5 | 22–27 |
| Baja California Norte | 2 | 27.0 | 26–28 | 12 | 25.7 | 25–29 |
| Baja California Sur | | | | | | |
| San Ignacio | 5 | 28.0 | 26–31 | 2 | 26.0 | 25–27 |
| Commondu | 5 | 29.8 | 26–33 | 4 | 27.0 | 26–28 |
| Cape Region | 3 | 29.0 | 27–31 | 5 | 26.6 | 26–28 |
| Isla Monserrate | | | | 1 | 30 | |
| Isla San Jose | 1 | 25 | | | | |
| Isla San Marcos | | | | 1 | 33 | |
| Isla Cedros | 1 | 31 | | 1 | 26 | |

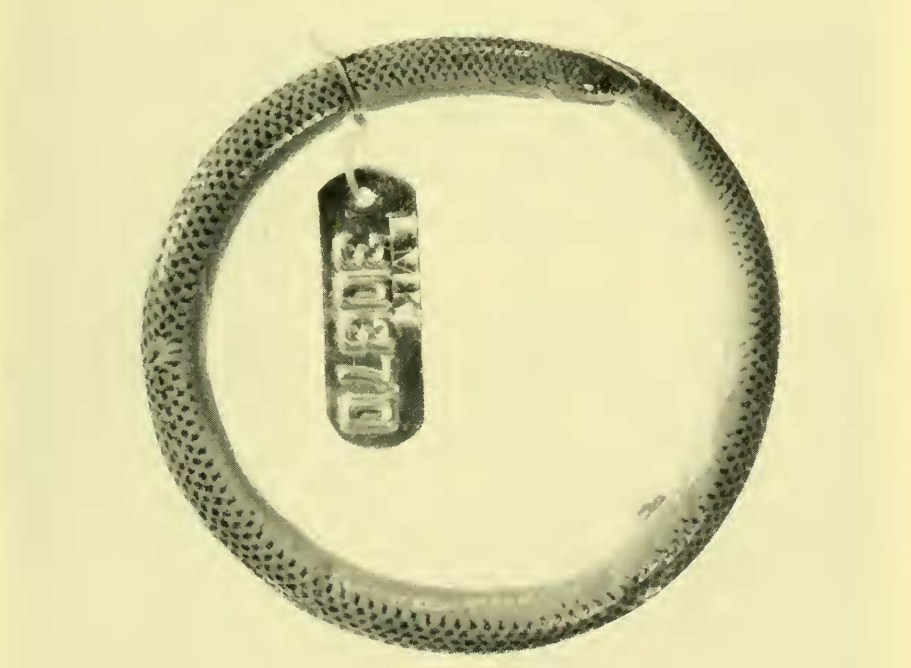

FIGURE 9. *Chilomeniscus stramineus esterensis* Hoard (LMK 30370), from Estero Salina, Baja California, Mexico.

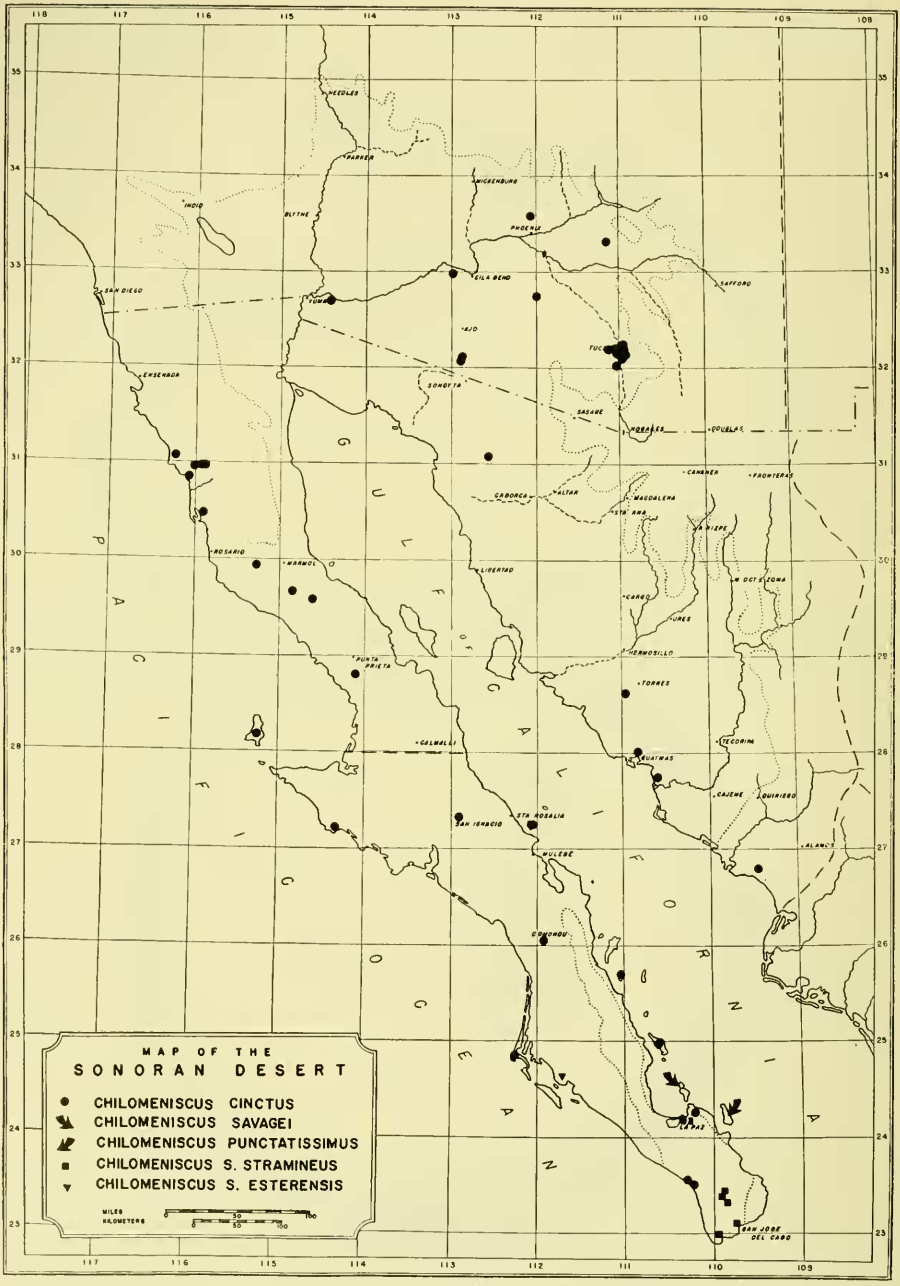


Figure 10. Distribution of *Chilomeniscus* in western North America. Note that the genus is largely confined to the Sonoran Desert region as defined by Shreve (1951) [as outlined by finely stippled border].

## Check List

### Chilomeniscus Cope

*Chilomeniscus* Cope, 1860, Proc. Acad. Nat. Sci. Philadelphia, 12:339 (type species *C. stramineus* Cope, by monotypy).

### Chilomeniscus cinctus Cope.

*Chilomeniscus cinctus* Cope, 1861, Proc. Acad. Nat. Sci. Philadelphia, 13:303 (type locality near Guaymas, Sonora, Mexico; type in Museum of Comparative Zoology, Harvard University).

*Chilomeniscus ephippicus* Cope, 1867, Proc. Acad. Nat. Sci. Philadelphia, 19:85 (type locality Owens Valley, California; type in United States National Museum). The type locality of *C. ephippicus* is "Arizona Valley" (= Owens Valley), California. This is probably in error. No specimens of *Chilomeniscus* have since been reported from California although many areas in southern California, which could provide suitable habitats for this animal, have been more intensely collected than most any other area in the world. Much of William Gabb's material, probably including this specimen collected by G. H. Horn, was obtained in northern Baja California, and it may be that this specimen was obtained there. Cope (1875, p. 35) stated that *Chilomeniscus ephippicus* was from Owens Valley, California, but following in parenthesis added, "Sonora subregion." Yarrow, in 1882 (p. 86), reported on three specimens of this nominal species, two supposedly from "Arizona Valley," California, and one from Camp Mojave, Arizona. Based on our study we are unable to come to a definite conclusion as to the exact source of the type material of this form. Though we think it probably came from northern Baja California, we are not sure. We are certain, however, that it was not taken in California's Owens Valley.

*Chilomeniscus stramineus fasciatus* Cope, 1892, Proc. United States Nat. Mus., 14:595 (type locality La Paz, Baja California Sur, Mexico; syntypes [4] in the United States National Museum).

Material Examined (94). ARIZONA: Tucson (LMK 32058; MVZ 57070; UMMZ 64069; USNM 15788–15790, 16806, 62545, 118570). 10 mi. S. Tucson (CM 19344–19345). 2 mi. N. Tucson (LMK 33383). 4 mi. N. Tucson (LMK 34333). Verde Valley, near Tucson (LMK 44236). West of Tucson, on route 86 (MCZ 62379–62380). 7 mi. S. Tucson (UMMZ 70376). Xavier (LMK 32510, 32795). Casa Grande National Monument (LMK 34068). San Xavier Mission (LMK 34316). Cave Creek (CAS 17551). Cabali Mts. (CAS 33834). Santa Catalina Mts.[3] (CAS 34172). 20 mi. S. Ajo (CAS 81422). 8 mi. W. of Wellton (CAS 80689). Superior (MCZ 11976). Ajo road, 23 mi. from Mexican border (MCZ 62378). 2½ mi. W. Sahuarita, on west side of Santa Cruz River (MVZ 67187). Tucson Range (USNM 60975). 6 mi. W. Gila Bend (USNM 62341). Sycamore Canyon (USNM 62566). Pima County [without exact locality] (USNM 56322). Arizona [without exact

3. Prison Road, Santa Catalina Mts. (BYU 10162–10163).

locality] (CAS 33839–33840, LMK 27003). CALIFORNIA (see discussion under *C. ephippicus* above): Owens Valley (USNM 8897 [Holotype of *C. ephippicus*]). MEXICO: *Sonora*: Alamos (AMNH 64245). Guaymas (AMNH 66338). 20 mi. S. of Guaymas (AMNH 70692). About 40 mi. NW of Carborca, vicinity of Estacion Las Enchilayas (CNHM 74961–74962). East coast of Gulf of California, near Guaymas (MCZ 24 [Holotype of *C. cinctus*]). 20 mi. S. of Navajoa (MVZ 71365). 29 mi. S. Hermosillo (USC 942). *Baja California Norte:* Socorro (AMNH 64512, UMMZ 77068). Faraway Ranch, 30 mi. S. El Marmol (LMK 38663). 10 mi. S. Cataviña (LMK 42054). 11.2 mi. E. San Telmo (LMK 42324). 8.4 mi. E. San Telmo (LMK 42325). 12 mi. E. San Telmo (LMK 42737). San Antonio River, NE of Arroyo Seco (LMK 43378). About 10 mi. S. Punta Prieta (SDNHM 17390). San Antonio (CNHM 1129). San Quintin (CNHM 1125, USNM 37520). San Fernando (USNM 21539). Valle Trinidad (LMK 30371). *Baja California Sur:* Commondu (CNHM 25871–25872, MVZ 13776–13780, USNM 65825). San Ignacio (LMK 3828–3830, MVZ 10675, 13781, UMMZ 76461 [2]). Trail between Loreto and Commondu (USNM 67376–67377). La Paz (AMNH 14225, MCZ 37226, UMMZ 59792, USNM 12630 [2 syntypes of *Chilomeniscus stramineus fasciatus* Cope]). Bahia de los Muertos (CAS 91244). 5.3 mi. NW of Todos Santos (CAS 91401). Todos Santos (CAS 45981). Ballenas Bay (USNM 15158). Chametha Ranch (MCZ 36900). *Gulf of California*: Isla Monserrate (SDNHM 50173). Isla San Marcos (SDNHM 50174). Isla San Jose (SU 14035). *Pacific Coast of Baja California Islands*: Magdalena (USNM 37521). Cedros (MCZ 19731, CNHM 130286).

**Chilomeniscus punctatissimus** Van Denburgh and Slevin.

*Chilomeniscus punctatissimus* Van Denburgh and Slevin, 1921, Proc. California Acad. Sci., ser. 4, 11:98 (type locality Isla Partida Sur (Espiritu Santo), Gulf of California, Mexico; type in California Academy of Sciences).

Material examined (2): MEXICO: Isla Partida Sur (CAS 49156 [Holotype]). Isla Espiritu Santo (SDNHM 50175).

**Chilomeniscus savagei** Cliff.

*Chilomeniscus savagei* Cliff, 1954, Trans. San Diego Soc. Nat. Hist., 12:71 (type locality Cerralvo Island, Gulf of California, Mexico; type in Division of Systematic Biology, Stanford University).

Material examined (6): MEXICO: Isla Cerralvo (CAS 85010 [Paratype], 88626, 92994, 93014, SDNHM 44394, SU 14034 [Holotype]).

**Chilomeniscus stramineus esterensis** Hoard.

*Chilomeniscus stramineus esterensis* HOARD, 1939, Jour. Entomology and Zool., Pomona College, 31:45 (type locality Estero Salina, Baja California Sur, Mexico; type in San Diego Natural History Museum [formerly in personal collection of Dr. Laurence M. Klauber]).

MATERIAL EXAMINED (8): MEXICO: *Baja California Sur*: Estero Salina (opposite Isla Santa Margarita) (LMK 30364–30368, 30370 [Paratypes], 30372–30373).

**Chilomeniscus stramineus stramineus** Cope.

*Chilomeniscus stramineus* COPE, 1860, Proc. Acad. Nat. Sci. Philadelphia, 12:339 (type locality Cabo San Lucas, Baja California Sur, Mexico; syntypes [4] in United States National Museum).

MATERIAL EXAMINED (75): MEXICO: *Baja California Sur*: Near Agua Caliente (UCLA 14604). El Chorro, near Agua Caliente (AMNH 87586). Boca de la Sierra (CAS 91461). Cabo San Lucas (AMNH 5578, CAS 63081, LMK 3831, 20015, USNM 4674 [2] and 6495 [2] [Syntypes]). Chenque Bay (SDNHM 44384). Eureka (MVZ 11852–11869, 11871–11875, 11878–11887, 11889–11901). La Paz (MCZ 36899, SDNHM 19709, USNM 12629 [2]). Miraflores (AMNH 5575, MCZ 15535, USNM 64579). San Jose del Cabo (CAS 4116, 63938, USNM 16406–16407, 16409).

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Cope, Edward Drinker

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1867. A collection of reptiles from Owens Valley, California, made and presented by Dr. Geo. H. Horn. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 19:85.
Original description of *Chilomeniscus ephippicus;* type locality Owens Valley, California. Members of the genus *Chilomeniscus* have not since been obtained in Owens Valley, California; it is reasonable to assume that the locality was in error.

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Lists *Chilomeniscus cinctus, C. stramineus* and *C. ephippicus* with brief remarks on distribution.

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1932. Herpetological records and notes from the vicinity of Tucson, Arizona, July and August, 1930. *Copeia*, 1932, no. 4, pp. 175–177.
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Mosauer, Walter

1936. The reptilian fauna of sand dune areas of the Vizcaíño Desert and of northwestern Lower California. *Occasional Papers, Museum of Zoology, University of Michigan*, no. 329, 22 pp., 2 pls.

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Schmidt, Karl Patterson

1922. The amphibians and reptiles of Lower California and the neighboring islands. *Bulletin of the American Museum of Natural History*, 46:607–707, pls. 47–57.

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Shreve, Forrest

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Stebbins, Robert Cyril

1954. Amphibians and reptiles of western North America. New York: McGraw Hill Book Company, Inc., xxii + 528 pp.

Drawings of *Chilomeniscus cinctus* (pl. 83, fig. B; entire animal dorsal view [must have been of specimen from Baja California Sur, Mexico. Too many bands for Arizona population]). Occurrence, description, behavior, food habits of *C. cinctus*.

Van Denburgh, John

1895. A review of the herpetology of Lower California. Part I. Reptiles. *Proceedings of the California Academy of Sciences*, ser. 2, 5:77–162, pls. 4–14.

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1897. The reptiles of the Pacific Coast and Great Basin. An account of the species known to inhabit California, and Oregon, Washington, Idaho, and Nevada. *Occasional Papers of the California Academy of Sciences*, no. 5, 236 pp.

Generic diagnosis of *Chilomeniscus;* Cope's original description of *C. ephippicus* quoted in its entirety with annotations.

Van Denburgh, John—Cont.

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Vorhies, Charles T.

1926. Notes on some uncommon snakes of southern Arizona. *Copeia*, no. 157, pp. 158–160.

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Wright, Albert Hazen, and Anna Allen Wright

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Yarrow, Harry Crecy

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Quotes Cope's original description of *Chilomeniscus ephippicus* from Owens Valley, California, with a colored illustration showing dorsal view of head and anterior region of body, dorsalateral view of midbody, and ventral view of tail region, plus a line drawing of a lateral view of the head.

1882. Check list of North American Reptilia and Batrachia, with catalogue of specimens in U. S. National Museum. *Bulletin of the United States National Museum*, no. 24, v + 249 pp.

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